

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of recognizing and indexing documents in a system having a scanner connected to a computer, the method comprising:

scanning a document;

designating, by a user, an arbitrary point P in at least one box of the scanned document
using a pointing device or member of the computer ~~to designate an arbitrary point P in at least one box of the scanned document;~~

searching for and identifying said box by applying a shape search algorithm over a determined search zone surrounding said point P previously designated the user;

recognizing by OCR the characters in said identified box of the scanned document;

storing the recognized characters in a first database connected to the computer to enable documents scanned in this way to be indexed; and

storing, in a second database connected to the computer, characterization data of said box of the scanned document, such that another box subsequently can be identified automatically without any point P within said another box being designated, for next documents of a same type.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The method according to ~~claim 3~~claim 1, wherein said shape search algorithm is a projection algorithm which counts the number of pixels present in each vertical or horizontal line of said determined search zone and which, on the basis of these count numbers, finds the horizontal and vertical lines present in said search zone by examining the peaks in the X and Y projection profiles.

5. (Currently Amended) The method according to ~~claim 3~~claim 1, wherein said shape search algorithm is an algorithm based on the Hough transform.

6. (Previously Presented) The method according to claim 1, wherein said OCR step is preceded by a step in which a user defines the type of character to be recognized in said box of the scanned document.

7. (Original) The method according to claim 1, wherein said scanning step is performed initially for a set of documents to be processed, with said steps of identifying the box and performing OCR being performed subsequently in succession for each of the documents.

8. (Original) The method according to claim 1, wherein said scanning step is initially performed for a first document, with said steps of identifying the box and performing OCR subsequently being performed on that document so as to define a sequence, with said sequence then being repeated in succession for each of the documents to be processed.

9. (Original) The method according to claim 1, wherein said documents to be recognized and indexed are a set of technical drawings of the same or different types.

10. (Original) The method according to claim 1, wherein said documents to be recognized and indexed are a set of forms, of the same or different types.

11. (Currently Amended) An apparatus for recognizing and indexing documents, the apparatus comprising:

a scanner for scanning a document and delivering an image of the scanned document;

a computer connected to the scanner to receive said scanned image;

a first database connected to said computer for storing said scanned image;

first software for using a pointing member to designate, by a user, an arbitrary point P in at least one box of the scanned image, for searching for and identifying the box containing said point P designated by the user, for recognizing by OCR the characters in said box of the scanned image, and for storing the recognized characters so as to enable images scanned in this way to be indexed, wherein the searching for and identifying said box is performed by applying a shape search algorithm over a determined search zone surrounding said point P previously designated by the user; and

a second database connected to the computer to store characterization data of said box of the scanned image, such that another box subsequently can be identified automatically by said first software without any point P within said another box being designated, for next documents of a same type.

12. (Canceled)

13. (Previously Presented) The apparatus according to claim 11, further comprising second software for defining the type of data to be recognized in said box of the scanned image.

14. (Previously Presented) The apparatus according to claim 11, wherein the first and second databases are integrated in a memory of the computer.

15. (Previously Presented) The apparatus according to claim 11, wherein said pointing member includes a keyboard of the computer or a finger of the user.

16. (Original) A computer-readable medium having embodied thereon software to be processed by a computer connected so as to receive a scanned image, the software being operable to cause said computer to perform the functions of the first software of claim 11.

17. (Previously Presented) The apparatus of claim 11, wherein the first software includes a shape search algorithm.

18. (Previously Presented) The apparatus of claim 11, wherein the first software includes a projection algorithm for counting the number of pixel present in each vertical or horizontal line of a determined search zone surrounding said previously designated point P.

19. (Previously Presented) The apparatus of claim 18, wherein the projection algorithm locates, based on the counted numbers, the horizontal or vertical lines present in the search zone by analyzing peaks in X or Y projection profiles.

20-21. (Cancelled)

22. (Currently Amended) A method of recognizing and indexing documents in a system having a scanner connected to a computer, the method comprising:

scanning a document;

manually designating, by a user an arbitrary point P in a predetermined area of the scanned document, if a type of the scanned document is not known;

searching for and identifying a box around the arbitrary point P of the scanned document by applying a shape search algorithm over a determined search zone surrounding the arbitrary point P designated by the user;

storing, in a database connected to the computer, characterization data of the identified box of the scanned document, such that boxes in next documents of a same type can be identified automatically without designation of an arbitrary point P on the next documents;

recognizing characters in the identified box of the scanned document; and

storing the recognized characters to index the scanned document.